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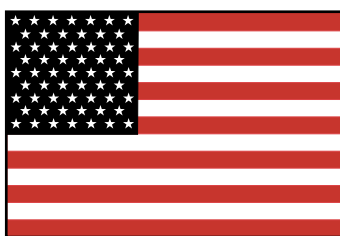
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AVIATION MAINTENANCE ALERTS



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**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

BEECH

Beech; Model C-23; Sundowner; Defective Door Structure; ATA 5210

After returning from a flight, the pilot reported experiencing severe buffet during slow flight, landing approach, and landing. The buffet was extremely aggravated by a left side slip maneuver.

The technician discovered the left cabin door's (P/N 169-420036-147) bottom gasket was missing, and the fiberglass door structure was broken adjacent to the last rivet in the diagonal gusset. This defect allowed air to escape from the cabin and disrupt the airflow over the left wing and horizontal stabilator. An inspection of the right cabin door revealed the structure was broken in a similar manner. After he made the repairs in accordance with the appropriate technical data, the flight test results were satisfactory.

The submitter suspects this damage was caused by pilots leaving the doors open for cooling during ground operation and/or wind gusts slamming the doors hard against the stops.

Part total time-8,100 hours.

Beech; Model A-36; Bonanza; Fuel Pump Failure; ATA 2822

The pilot reported that during a descent for landing, the engine began losing power making it necessary to operate the electric fuel boost pump to maintain sufficient engine power for landing.

The technician observed fuel stains in the nose landing gear well and on the lower fuselage skin in the vicinity of the right exhaust stack. He also noticed fuel leaking from the "seal drain" line for the engine-driven fuel pump (P/N 646766-4A1). Though there was no evidence of fire, the potential was present for a catastrophic fuel-fed fire.

Teledyne Continental has addressed fuel pump seal drain leakage in Service Bulletin (SB) 01-1. However, SB 01-1 is not applicable to the fuel pump installed on this aircraft. SB 01-1 covers engine-driven fuel pumps manufactured during a 2.5 year period of time which have not accumulated 300 hours of operating time.

In this case, the fuel pump gave no warning of impending failure. The submitter recommended that Teledyne Continental consider revising and updating SB 01-1 to include any pump manufactured within the date range regardless of the accumulated operating time.

Part total time-608 hours.

Beech; Model A-36; Bonanza; Air-Conditioning System Failure; ATA 2110

The aircraft owner reported the air-conditioning system was inoperative and asked a repair facility to correct the problem.

A technician discovered the air-conditioning system compressor drivebelt was extremely loose. Investigating further, he found the drivebelt, idler pulley (P/N 646391) bearing had seized which allowed the idler pulley to separate from the shaft. The pulley assembly was inside the lower engine compartment cowling.

The submitter stated this was the second like defect he had seen. He suggested giving the idler pulley and bearing assembly thorough and frequent inspections.

Part total time not reported.

Beech; Model 58P; Baron; Defective Engine Throttle Assembly Installation; ATA 7603

After returning from a flight, the pilot reported the right engine throttle was very stiff and difficult to operate.

A technician found the throttle control assembly (P/N 102-389009-1) was replaced approximately 4 months prior to this event. He removed the throttle cable and discovered that it was chafing very hard against the lower part of the turbocharger compressor-housing clamp. Also, the chafed area of the cable displayed evidence of severe overheating.

The submitter stated the throttle cable should have been routed above the exhaust area. The exhaust heat shield would have protected the cable from chafing. He suggested that when replacing parts with proper routing data, technicians should ask questions before proceeding.

Part total time-242 hours.

Beech; Model 58P; Baron; Smoke in the Cockpit; ATA 3340

Prior to takeoff, the pilot turned on the light systems as required on the checklist. During the takeoff run, the cockpit filled with smoke, and the pilot aborted the takeoff.

While troubleshooting the lighting systems, a technician found the "Pulse Light" system (P/N 2400-25-4-4), installed via Supplemental Type Certificate (STC), was not properly installed. The unknown installer did not follow the STC installation instructions and omitted the installation of the circuit breaker supplied with the STC. He determined an electrical short in a connector adjacent to a light fixture caused the burning wires and smoke. The STC was incorporated in 1998.

The "Pulse Light" system wiring was severely burned when there was an electrical overload of the system. The technician replaced the damaged system components and installed the circuit breaker. An operational test of the light system was satisfactory, and the aircraft was approved for return to service.

Part total time not reported.

Beech; Model 76; Duchess; Starter Malfunction; ATA 8011

This aircraft is used in a training environment and while attempting to start the left engine, the pilot heard an abnormal noise and the starter failed.

A technician discovered the bushing at the drive end had separated from the casting. This is the forward pivot bushing (bearing) for the “Bendix” drive shaft. A certified repair station recently overhauled this starter unit.

Given the relatively short operating time since the starter was overhauled, the submitter recommended inspecting and testing overhauled starters when they are received and at frequent intervals after they are placed in service.

Part total time since overhaul-432 hours.

Beech; Model E-90; King Air; Landing Gear Failure; ATA 3230

The pilot reported the landing gear stopped approximately one-third of the way to the “up” position when he retracted the landing gear after takeoff. Also, the landing gear control circuit breakers opened, and the “gear unsafe” light illuminated.

While attempting to extend the gear using the emergency system, the pilot stated he, “got 3 pumps of the handle and it stopped and would not move further.” When preparing for a “gear-up” landing, the pilot placed the landing gear control in the “up” position and reset the circuit breakers. At that time, the gear retracted. He placed the gear control in the “down” position, and the gear went to the “down-and-locked” position. After landing safely, the pilot summoned maintenance personnel.

The technician jacked the aircraft and performed a landing gear retraction test. During the test, the nose gear made a loud abnormal sound and would not retract. He discovered the nose gear actuator (P/N 50-820208-5) turned with great difficulty and felt “ratchety.” After removing and replacing the nose gear actuator, the landing gear system functioned properly. He speculated the “gear teeth on the 90 degree gears were broken. He sent the actuator unit to a repair facility for repair without disassembly.

Part total time-330 cycles.

Beech; Model 95-B55; Baron; Cabin Heater Failure; ATA 2140

The aircraft owner brought the aircraft to a repair facility with a report that the cabin heater did not work.

The technician inspected the heater system (Janitrol, Model S-50) and discovered a hole approximately .5 inch in diameter in the combustion head (P/N 51A45). The hole was located just below and to the right of the igniter near the fuel supply line. (Refer to the illustration.)

The submitter recommended all concerned personnel conduct a visual inspection and/or pressure decay test each 100-hours of heater operation.

Part total time-1,740 hours.



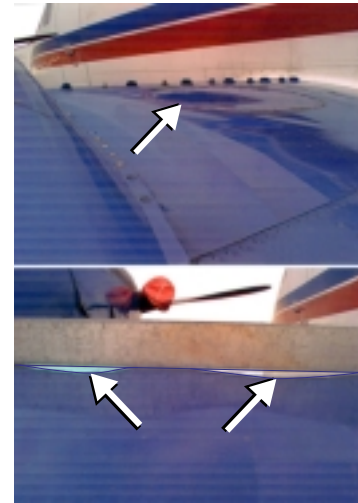
Beech; Model 1900C; Airliner; Left Wing Structural Defect; ATA 5730

During a scheduled inspection, a technician discovered a severe structural defect on the left wing.

The upper wing panel (P/N 114-120036-613) on the left inboard wing was severely buckled and deformed. The damage was located aft of the wing spar where the panel was debonded from the “honeycomb” structure inside the fuel bay. (Refer to the illustration.) The technician speculated this defect is the result of age, many hours of operation, and possibly exceptional and abnormal operational structural stresses.

All operators of like aircraft are cautioned to be vigilant for similar defect.

Part total time-31,242 hours.



Beech; Model 1900-D; Airliner; Missing Fuel System Parts; ATA 2821

During a scheduled inspection, a technician discovered that some parts were missing from the fuel system.

The fuel strainer (P/N 118-920040-3) and hose (P/N 156005-12D050) were missing from the right aft fuel transfer pump. Since there was no evidence these parts were ever installed, the submitter believes they were omitted when the aircraft was manufactured.

The submitter suggested that all operators of like aircraft conduct a one-time inspection of their aircraft for the presence or absence of these components.

Aircraft total time-2483 hours.

CESSNA**Cessna; Model 182S; Skylane; Communication System Failure; ATA 2300**

The pilot reported the left push-to-talk microphone switch (P/N S2870-1) did not work.

The technician removed and replaced the switch. However, a system test failed and he removed the new switch. A bench test confirmed the new switch was also faulty. During the bench test and installation, he exercised care to avoid any overheating of the switch and other components. After he installed another new switch, the system functioned properly.

Since the original switch had only accumulated 548 hours of operation, it was considered to be a premature failure.

Part total time previously stated.

Cessna; Models as Stated Below; Corrosion Inspection of Wing Attachment Fittings; ATA 5740

The FAA, Aircraft Certification Office (ACO), ACE-118W, located in Wichita, Kansas, submitted this article. It is applicable to Cessna aircraft models 140, 150, 152, 170, 172, 175, 177, 180, 182, 185, 205, 206, 207, and 210. The following inspection procedure recommendations were issued due to numerous findings of structural corrosion associated with the wing attachment fittings. *(This article is printed as it was received from ACE-118W.)*

The recommended inspection procedures include removal of the top and bottom fairings covering the wing/fuselage attachments and inspection of the “spar block” and the center wing spar and the wing spar assembly for corrosion.

Corrosion is the natural process of all materials returning to their natural state. Try as we may, corrosion cannot be stopped, it can only be delayed. From the time raw materials are modified during the manufacturing process they begin this migration back to their original or natural state. Therefore, the time it takes a material to return to its natural state is the only factor our efforts can influence.

Initially, aluminum corrosion is evidenced by the presence of aluminum oxide displayed as a white or gray/white powder on metal surfaces. Since moisture is the catalyst for the corrosion process, usually the first indication is a discoloration of the aluminum surfaces and adjacent to attachment hardware. In the advanced stages of corrosion the interior of the metal is invaded and flakes or layers of metal are exfoliated.

The areas of concern for the aircraft listed above are the spar block, spar channels, and the upper end of the doorposts. Any evidence of corrosion in these areas is cause for removing the wings to determine if more severe corrosion exists in areas that are not otherwise possible to inspect.

In all cases, the inspector should refer to the manufacturer’s technical data for inspection criteria, corrosion limits, and appropriate treatment and protective coatings for corroded areas.

Cessna; Model 172RG; Cutlass; Landing Gear Defect; ATA 3230

Airworthiness Directive (AD) 2001-06-06 requires the installation of a main landing gear actuator bushing that is supplied in Cessna Kit, SK 172-151. The technician complied with AD 2001-06-06.

During a scheduled inspection, the technician discovered the bushing (P/N 2490002-2) was defective. The bushing had worked its way out of the housing and had to be replaced.

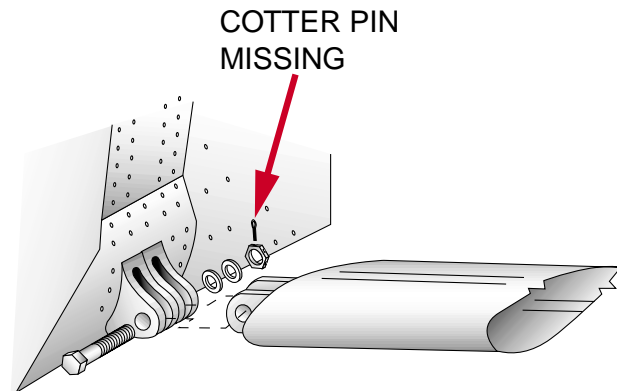
The submitter stated this was the second occurrence of this defect he had experienced. Both occurrences occurred after a “few” hours of operation. He suggested the manufacturer and/or the FAA re-evaluate the bushing installation to assure a proper fit. Also, he suggested that other technicians be aware of these findings and take appropriate inspection action.

Part total time-137 hours.

Cessna; Model 208B; Caravan; Defective Wing Strut Attachment; ATA 5741

During the first scheduled inspection of a new aircraft, the technician found the wing lift strut attachment defective.

The bolt cotter pin (P/N MS24665-357) for the left lower lift strut attachment to the fuselage was missing. (Refer to the illustration.) There was no evidence that the cotter pin had ever been installed; therefore, the submitter presumed it was omitted when the aircraft was manufactured. There was evidence that the bolt and nut had rotated, which could allow separation of the nut and loss of the bolt. It is very likely that loss of this attachment would lead to structural failure and wing separation.



The manufacturer's maintenance manual specifies the installation instructions and requires the nut be tightened "snug" and then rotated to the right (tighten) to align the cotter pin holes.

Aircraft total time-193 hours.

Cessna; Model T-210L; Centurion; Wing Flap Structural Damage; ATA 5750

During a scheduled inspection, the technician discovered a crack in a rib on the left wing flap.

The cracked flap rib was located at the bellcrank support bracket rivet hole. The support bracket inboard lower rivet hole is where the crack originated, and it ran approximately 1 inch down and to the left.

The submitter speculated that extending the wing flaps at an excessive airspeed caused this discrepancy.

Part total time-3,505 hours.

Cessna; Model 414A; Chancellor; Chafing Wheel Brake Plumbing; ATA 3242

While conducting a scheduled inspection, the inspector discovered a wheel brake line was chafing.

The line (P/N 5100106-159) was routed under the copilot's seat pedestal and was chafing against a heater duct. The submitter secured a section of low-pressure hose over the brake line to insulate it and prevent chafing.

The submitter stated this defect may be common on other like aircraft and urged all technicians to be diligent when inspecting this area.

Part total time-4,376 hours.

Cessna; Model 425; Conquest; Oxygen System Damage; ATA 3500

While installing communication equipment, the technician discovered the oxygen system plumbing was damaged.

The technician removed the left cabin side wall upholstery and found that an air duct to the overhead cabin air supply was in contact with an oxygen system line. The cabin air supply duct had evidence of burning and severe deterioration where the oxygen line (P/N 5100109-51) contacted the duct. Examination of the oxygen line revealed it was severely corroded and the wall thickness was penetrated in two places.

Oxygen leaking behind the cabin side wall creates a very hazardous condition and could lead to fire and a catastrophic accident.

Part total time-5,390 hours.

Cessna; Model 550; Citation; Wheel Brake Failure; ATA 3242

This article was submitted by Mr. John Dostal, an airworthiness inspector with the FAA, Richmond, Virginia, Flight Standards District Office. *(This article is printed as it was received.)*

While preparing for a flight, the crew released the brakes to taxi to the runway, and the aircraft would not move.

Maintenance technicians removed the right main wheel and brake assembly and found that the brake stator (P/N 133-893-2) was broken into three pieces. The pieces of the stator were jammed between the wheel and brake assembly preventing rotation of the wheel. It appeared the brake stator failure originated as cracks at the cooling holes. (Refer to the illustration.) Had the stator failed during a landing, it may have resulted in loss of aircraft control and a catastrophic accident.

The brake assembly (P/N 1528-6) was manufactured by B.F. Goodrich and Cessna has issued Service Bulletin (SB) 550-32-41, which had been complied with on this aircraft and was so marked. The submitter stated, "This seems to be an ongoing problem with these brake stators." The FAA Service Difficulty data base contains five additional reports of similar brake failures and, at this time, the FAA is considering the issuance of an Airworthiness Directive to correct this problem.



Part time since overhaul-838 hours.

Cessna; Model 560; Citation; Bleed Air Leaks; ATA 7500

After completing a scheduled inspection, the technician conducted an operational test of the engines to check for leaks. During the test, a coworker discovered a bleed air leak in the right engine outboard bleed air line.

The leak was traced to the flexible section of a bleed air line elbow assembly (P/N 6555039-3). The submitter stated the bleed air plumbing associated with this engine causes the flexible joint to have a severe curve, which makes it difficult to properly align the joints. The plumbing forward of the elbow assembly is attached to the inlet bleed air valve, which is rigidly mounted to the inlet.

The submitter speculated that excessive stress on the flexible plumbing joint, over a period of time, leads to failure. Also, he stated that most of the bleed air connections in the engine nacelles have alignment problems.

Part total time-2,857 hours.

Cessna; Model 560; Citation; Landing Gear Malfunction; ATA 3230

During a scheduled inspection, the inspection team conducted a landing gear retraction test and found the nose gear would not retract.

A technician checked the hydraulic supply cart and found it was putting out the proper pressure. With the gear selected to the “up” position and hydraulic pressure on the system, a technician “kicked” the aft side of the nose gear and it retracted. The nose gear retracted normally and after five attempted retractions and five more “kicks” to make the nose gear retract, he replaced the nose gear actuator (P/N 9912120-1). Although the actuator was not disassembled, he speculated the actuator was bypassing fluid and/or the actuator locking mechanism was preventing nose gear retraction. During the tests, the gear indications in the cockpit were normal, which could have led to collapse of the nose gear during landing.

The technician believes that during flight, the air loads and vibrations caused normal retraction of the nose gear as simulated by the “kicks.” By finding and fixing this defect the inspection team prevented a future operational failure.

Part total time since overhaul-499 hours.

CIRRUS

Cirrus; Model SR-22; Improper Engine Induction System Installation; ATA 7160

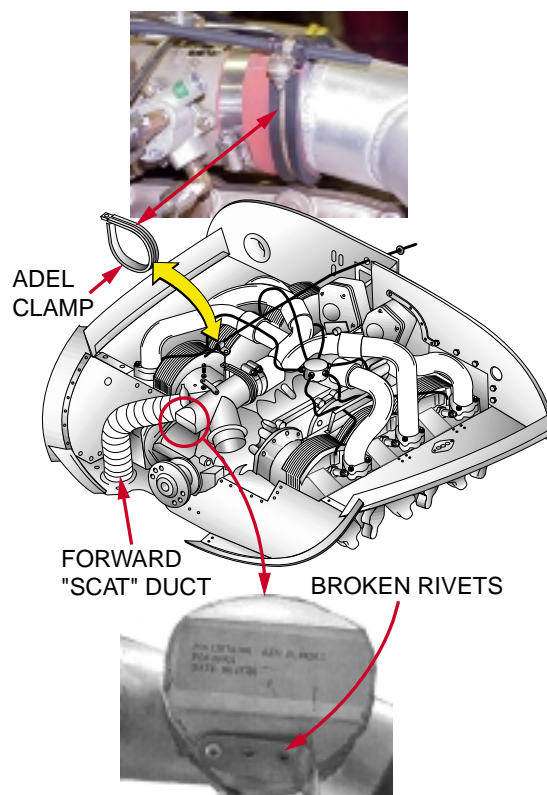
While conducting a ground training class, the instructor removed the top engine cowling. One of the pilot/students, who was also an Airframe and Powerplant technician with an Inspection Authorization, noticed that the end of the induction air filter housing was in contact with the engine case. The filter housing also incorporates the alternate air control valve and associated ducts.

The filter housing is connected to the engine throttle body via a short section of induction hose, used as a flexible joint, which allows for movement between ridged induction system components. The aft end of the hose joint is secured by a worm-drive hose clamp on one end. The opposite (forward) end of the induction hose is connected to the alternate air induction air filter housing and is secured by a cushion or “Adel” clamp. The cushion or “Adel” clamp is intended as a mounting point for the alternate air valve actuating cable.

The “Adel” clamp does not provide the same clamping pressure or forces provided by a worm-drive hose clamp, and the “Adel” clamp is not intended for this use. The improper application of the “Adel” clamp caused the alternate air induction air filter housing end to rotate within the hose joint, the air filter end to contact the engine case, and an attached section of the duct (SCAT hose) to wear against adjacent engine baffling.

The manufacturer’s technical data (maintenance manual) depicts the use of two worm-drive hose clamps used to secure the hose joint and an “Adel” clamp for attachment of the alternate air valve cable. (Refer to the illustrations.)

In addition, a small stainless steel “L-shaped” bracket supports the forward end of the airbox air filter and air valve assembly. The bracket is attached to the engine case with a bolt and to the airbox (P/N 13874-00) by three “blind” rivets. Movement of the airbox, via the Adel clamp, caused two of the three blind rivets to fail.



Since this is a newly-certificated aircraft design, maintenance personnel should be particularly observant for components that may not meet the manufacturer’s design criteria, have not been properly assembled, or have failed in service. Manufacturing defects on new aircraft usually become apparent after a relatively short time in service.

The submitter recommended that owners of like aircraft conduct a one-time inspection to ensure the engine induction air system is properly installed. An important lesson can be learned from this discrepancy. Never assume the installation of a component is correct even if, “it came that way from the factory.”

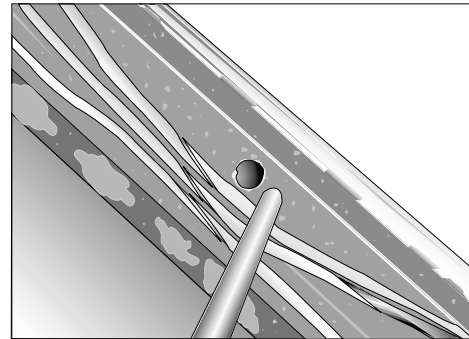
Part total time-38 hours.

PIPER

Piper; Model J3; Cub; Engine Failure; ATA 7414

The aircraft was destroyed in an accident when the engine failed during takeoff. The FAA investigated the accident.

During the accident investigation, the FAA inspector determined the most probable cause of the engine failure occurred when both magneto “P-lead” wires were grounded. The “P-lead” wires were grounded to a screw that secures the left inner and outer window trim strips. After removing the magneto switch wiring, the inspector found that both “P-lead” wires had chafed against the screw threads until the insulation was penetrated. Grounding of the “P-lead” wires had the same effect as turning off both magneto switches. (Refer to the illustration.)



It appeared the inner window trim piece had been altered from the original design. The original fasteners attaching the trim were drilled out to accommodate the installation of longer screws and nuts.

The submitter suggested that all operators of like aircraft conduct a one-time inspection to determine if the window trim pieces have been modified by installation of the longer screws and nuts. Any such installation should be immediately removed, so the aircraft can be returned to the original configuration. In addition, inspect the magneto wiring in this area and correct any damage found.

It seems amazing that this classic aircraft was lost because of such a mindless mistake.

Part total time-5,586 hours.

Piper; Model PA 23-250; Aztec; Fuel Tank Selector Failure; ATA 2823

After returning from a flight, the pilot reported the fuel tank selector failed.

The technician discovered the fuel tank selector cable (P/N 31384-00) was broken just below the swivel fitting on the right wing fuel tank selector handle. It appeared the cable failed because of metal fatigue, corrosion, age, and lack of lubrication.

Airworthiness Directive (AD) 80-18-10, dated September 8, 1980, deals with this subject and requires initial inspections and recurring inspections to detect and correct problems with the fuel tank selector system. The AD also includes, by reference, several Piper Service Letter and Service Bulletin publications.

The submitter speculated the recurring inspection and lubrication requirements of AD 80-18-10 had not been complied with for some time.

Part total time not reported.

Piper; Model PA 23-250; Aztec; Cabin Heater Fuel Shutoff Valve Failure; ATA 2140

During a scheduled inspection, a technician complied with the requirements of Airworthiness Directive (AD) 01-08-01, which incorporates Piper Service Bulletin A-107.

After determining the Janitrol heater (P/N 37D77/B3040) fuel shutoff valve was airworthy, the technician reinstalled it. Due to excessive soot in the heater exhaust pipe, he conducted a fuel system pressure test to verify the pressure setting was correct. After the test, he removed the “tee” fitting and gauge (used for the test) from the fuel shutoff valve (P/N 23D04) and noticed that fuel continued to drip from the valve outlet. He turned on the electric fuel pump briefly to pressurize the valve, but the leak continued.

The technician removed the faulty fuel shutoff valve but could not determine the part number. He replaced the fuel shutoff valve and stated, “it appeared to have been salvaged from another aircraft because the paint on the valve does not match this aircraft.” The submitter cautioned others to be aware of these findings during maintenance and inspections of similar cabin heaters.

Part total time is unknown.

Piper; Model PA 31-350; Chieftain; Heater Fuel Leak; ATA 2140

During a scheduled inspection, the inspector discovered the Jan Aero cabin heater fuel pressure regulator was leaking.

The aircraft maintenance records indicated that Airworthiness Directive (AD) 2001-08-01 and AD 2001-17-13 had been previously complied with, and the new-type fuel pressure regulator (P/N A23004-7.5) was installed. The fuel pressure regulator was leaking around the housing seal.

The submitter urged vigilant inspections for fuel leakage in this area on the new-type fuel pressure regulators.

Part total time-142 hours.

Piper; Model PA 31-350; Chieftain; Defective Autopilot; ATA 2210

After a flight, the pilot reported the aircraft “porpoised” approximately 5 degrees up and down with the autopilot engaged.

The technician replaced the autopilot (S-TEC) pitch control computer (P/N 0110-33T). He is aware of several other similar defects with the autopilot system and suspects these problems are caused when the servo drive speed is set too slow. He recommended increasing the drive speed. He stated that moving the mount location closer to the elevator bellcrank might lessen the mechanical delay in pitch from the computer to the servo.

Part total time-2,243 hours.

Piper; Model PA 31T-620; Cheyenne; Nose Wheel Steering Difficulty; ATA 3251

After a flight, the pilot complained the nose wheel steering was very stiff, more so in the right direction than the left.

The technician inspected the nose landing gear and the steering linkage in the nose wheel well and found no defect. He placed the aircraft on jacks and inspected the rudder pedal system in the cockpit. When he pushed on the pilot's right rudder pedal, the tube support block and the tube moved fore and aft.

The tube support block is bolted to a flange mounted to the left side of the nose wheel well, and the flange was cracked. The location of the flange, the upholstery attachment in the side of the tunnel, and other factors make proper inspection very difficult.

After removing the assembly, the technician found the inner and outer torque tubes were binding slightly. There were no provisions to lubricate the torque tubes or the support bearings. The manufacturer's Progressive Inspection Program does not contain a requirement for lubrication or inspection of the assembly. It is a very arduous task to remove the torque tube assembly.

Part total time-5,275 hours.

Piper; Model PA 32R-300; Lance; Uncommanded Nose Landing Gear Extension; ATA 3230

The pilot reported the nose landing gear came out of the wheel well without command during flight. He was able to land the aircraft safely.

The technician found the nose gear downlock hook (P/N 38078-02) was broken at the attachment to the actuator rod. He reported finding this type failure on several occasions, and the rate of similar failures has dramatically increased over the past year. These failures also involved parts with a low number of operating hours. He recommended checking the newly manufactured parts to make sure they were not made of a "substandard" material.

Technicians should be aware of the circumstances surrounding this failure and conduct a rigorous inspection for defects at every opportunity.

Part total time-352 hours.

Piper; Model PA 32R-301T; Saratoga; Propeller Control Defect; ATA 6122

The pilot reported that during cruise flight, he was not able to move the propeller lever. Later, when the speed was decreased for landing, the propeller lever became movable, and the system operated normally.

After a lengthy investigation, a technician discovered an engine cylinder baffle (P/N 85565-019) fouled or jammed the propeller governor (P/N V5-6) control arm during inflight conditions. Forward movement of the engine baffle during flight caused this problem.

This defect is the subject of Piper Service Bulletin (SB) 1049, which allows installation Kit 766-684 to correct the problem. Since this defect could lead to loss of propeller control in flight, the submitter recommended the FAA consider making SB 1049 mandatory via an Airworthiness Directive.

Part total time-197 hours.

Piper; Model PA 34-200T; Seneca; Loss of Engine Oil Quantity; ATA 7910

The pilot aborted a flight because of an oil leak on the right engine and taxied back to the parking ramp.

The technician discovered the source of the oil leak was the oil sump drain (P/N S6250). The lower engine-cowling panel had been installed “backward” causing it to depress the oil sump drain valve enough to cause a substantial leak. The oil drain valve was depressed only when the engine was operating.

The submitter cautioned all those concerned with like aircraft to be aware of the possibility of installing the lower cowling panel backward.

Part total time not reported.

Piper; Model PA 46-310P; Malibu; Flight Control System Defect; ATA 2730

While conducting a scheduled inspection, the technician discovered a defective elevator push-pull rod.

The elevator control rod (P/N 82833-02) was severely corroded and required replacement. The control rod is located in the tail section. It is exposed to moisture, dirt, debris, and other contaminants. Piper Service Bulletin (SB) 962 deals with this subject but does not apply to this particular part.

The submitter recommended that all technicians check this area closely for corrosion during scheduled inspections. This inspection is especially important on older aircraft.

Part total time-2,321 hours.

SABRELINER

Sabreliner; Model NA 265-80; Sabre; Defective Elevator Bolts; ATA 5520

While balancing the elevators, the technician experienced difficulty removing the elevator hinge support brackets from the elevator torque tube assembly.

The technician removed the entire elevator torque tube assembly from the empennage and discovered the elevator hinge bearing caps (P/N 285-220409-3) were missing. With the bearing caps missing, water entered the universal joints and caused contamination and corrosion. The vertical bolts (P/N AN4-41A) were severely corroded, and the upper bearings and lower bearings (P/N's 201KP8A and NA200KP6) were seized.

Part total time is unknown; however, it had been in service for approximately 11 years.

TWIN COMMANDER

Twin Commander; Model 690B; Corroded Seat Frame; ATA 2520

The following article was submitted by Mr. Greg Grooves, an Airframe and Powerplant technician with an Inspection Authorization. *(This article is printed as it was received.)*

During a routine interior refurbishment, a technician discovered a severely corroded aft-facing passenger seat back frame.

The backrest frame on the Custom Product seat (P/N 5810-6) has a diaphragm made of polyester filament fabric. The technician noticed abnormal bulges in the diaphragm material and what appeared to be rust-colored stains bleeding through the fabric. When the fabric was removed, it revealed exfoliation corrosion penetrating halfway through the steel wall of the frame.

The submitter stated this was not the first time he had noticed rust-colored stains on Twin Commander seat back frame diaphragms.

Part total time in service-24 years.

HELICOPTERS

BELL

Bell; Model 206L-3; Long Ranger; Engine Overtorque Condition; ATA 7322

The pilot reported an engine overtorque condition of 115 percent for 1 second.

After a thorough investigation, a technician determined the overtorque condition was caused by an exceptionally strong fuel control (Bendix P/N 2549092-5N) over the center spring. The extra spring strength allowed the engine RPM and torque to move up without command.

The submitter gave no explanation concerning the origin of the “strong” spring and no further details surrounding this occurrence.

Part total time not reported.

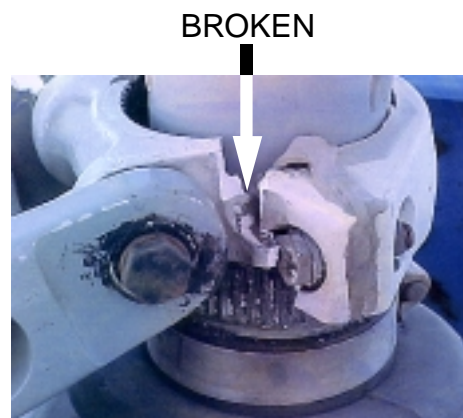
Bell; Model 206L-4; Long Ranger; Main Rotor Collar Failure; ATA 6230

While attempting a hover, the pilot noticed that an excessive amount of collective input resulted in very little response. He made a safe landing and requested that maintenance personnel investigate this problem.

A technician discovered that the main rotor mast assembly collar set (P/N 206-011-005-105) was broken. The collar broke just inboard of the clamp-up bolt. (Refer to the illustration.) He removed the part and sent it to Bell for evaluation.

The submitter offered no cause for this defect.

Part total time-573 hours.



Bell; Model 427; Tail Rotor Blade Damage; ATA 6410

During a scheduled inspection, a technician discovered a tail rotor blade was damaged.

The blade (P/N 427-016-001-109) outer composite layers were debonded from the blade root and the voids were visible. The submitter believes this defect was caused by spreading the blade during installation to get the pitch horn in place.

The submitter suggested that the manufacturer consider making the opening in the tail rotor blade a little wider to accommodate the installation of the pitch horn.

Part total time-41 hours.

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

LONGE-Z

Long E-Z; Engine Failure; ATA 8550

This aircraft used a Textron Lycoming, Model O-235-L2C engine.

During a flight, the pilot noticed a loss of engine oil pressure followed by complete engine failure. The pilot was able to land the aircraft with only minor damage and no personal injuries.

A technician investigated and found all the oil was lost and the engine was “frozen”. He determined the engine oil exited from the displaced crankshaft seal.

The submitter speculated that when the engine oil system breather tube “iced” over, the engine crankcase pressurized and pushed the crankshaft seal out of place.

Part total time-675 hours.

POWERPLANTS AND PROPELLERS

TELEDYNE CONTINENTAL

Teledyne Continental; Model IO-520; Crankshaft Failure; ATA 8520

This engine was installed in a Cessna Model 207A aircraft.

After reports of the engine not making full RPM, a technician replaced the propeller governor. He conducted an operational test, which was within normal parameters.

On the next flight, shortly after takeoff, the pilot noticed the oil pressure fell below the green arc and he shut down the engine. He saw oil on the windscreen, heard a loud bang, and the propeller separated from the aircraft. He was able to land the aircraft safely and summon maintenance personnel.

It was evident to the technician that the engine crankshaft had broken. It failed at the crankshaft nose seal location, which caused the loss of the propeller.

Airworthiness Directive (AD) 99-19-01 and AD 2000-23-21, along with the referenced manufacturer Service Bulletins, deal with this subject. All concerned technicians are encouraged to strictly comply with the requirements of these ADs.

Part total time since rebuilding-347 hours.

AIRNOTES

THE BEST OF WISHES FOR THE HOLIDAYS

This past year has brought many happy events and advances in the aviation industry.

The FAA, Flight Standards Service, Regulatory Support Division, AFS-600, has been proud to make this publication available to the aviation community over the past year. It is our hope that you have enjoyed and benefited from the information we furnished, and we look forward to continued service to each reader.

Whatever deity you honor and reverence, we would like to take this opportunity to extend our best wishes to all for a happy and joyous celebration this Holiday Season. May the coming year bring new and greater advancements in aviation safety for everyone.

**MERRY CHRISTMAS AND A PEACEFUL
AND PROSPEROUS NEW YEAR**

AC 43.13-1B, CHANGE 1

The FAA has issued Change 1 to Advisory Circular (AC) 43.13-1B, Acceptable Methods, Techniques, and Practices - Aircraft Inspection and Repair. This change is available from the Government Printing Office.

Change 1 was initiated to correct errors incorporated during publication, as well as, the inclusion of additional new maintenance information.

The text changes are indicated by a vertical bar (|) in the outside page margins. The change number and date are entered at the top of each changed page. Rearranged pages having no new material also have the change number and date. Pages having no changes retain the same heading information.

Chapter 12, Section 4, Pitot Static, and Chapter 13, Human Factors, contain new information.

The entire document (AC 43.13-1B) including Change 1 is now available on the internet at:
<<http://av-info.faa.gov/dst/43-13>>

Instructions for downloading this document are identified in the table of contents (page one).

Any questions concerning this publication should be directed to:

Mr. George Torres (AFS-640)
Telephone: (405) 954-6923
FAX: (405) 954-4104
E-Mail: <george.torres@faa.gov>

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In the past, we furnished the GPO subscription form in this publication. The older issues which contain the subscription form, may not have current pricing information. Since GPO controls price increases, contact GPO for current subscription information.

ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

<http://av-info.faa.gov/isdr/>

When the page opens, select “M or D Submission Form” and, when complete, use the “Add Service Difficulty Report” button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY REPORTING PROGRAM

The objective of the Service Difficulty Reporting (SDR) Program is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products fleet wide. The SDR program is an exchange of information and a method of communication between the FAA and the aviation community concerning inservice problems.

A report is filed whenever a system, component, or part of an aircraft, powerplant, propeller, or appliance fails to function in a normal or usual manner. In addition, if a system, component, or part of an aircraft, powerplant, propeller, or appliance has a flaw or imperfection which impairs, or which may impair its future function, it is considered defective and should be reported under the program.

These reports are known by a variety of names: Service Difficulty Reports (SDR), Malfunction and Defect Reports (M and D) and Maintenance Difficulty Reports (MDR).

The consolidation, collation and analysis of the data, and the rapid dissemination of trends, problems and alert information to the appropriate segments of the aviation community and FAA effectively and economically provides a method to ensure future aviation safety.

The FAA analyzes SDR data for safety implications and reviews the data to identify possible trends that may not be apparent regionally or to individual operators. As a result of this review, the FAA may disseminate safety information to a particular section of the aviation community. The FAA also may adopt new regulations or issue airworthiness directives (AD's) to address a specific problem.

The primary source of SDR's are certificate holders operating under Parts 121, 125, 135, 145 of the Federal Aviation Regulations, and the general aviation community which voluntarily submit records. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft and maintenance surveillance as well as accident and incident investigations.

The SDR database contains records dating back to 1974. Reports may be submitted on the Internet through an active data entry form or on hard copy. The electronic data entry form is in the AFS-600 Aviation Information web site under the heading SDR Main Menu. The URL is: <<http://av-info.faa.gov>>

A public search/query tool is also available on this same web site. This tool has provisions for printing reports or downloading data.

At the current time we are receiving approximately 45,000 records per year.

Point of contact is:

Tom Marcotte
Service Difficulty Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125

Telephone: (405) 954-6500
9-AMC-SDR-ProgMgr@mmacmail.jccbi.gov

ADDRESS CHANGES

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to: U.S. Government Printing Office, **ATTN: SSOM, ALERT-2G**, 710 N. Capital Street N. W., Washington, DC 20402

You may also send your address change to GPO via FAX at: (202) 512-2168. If you FAX your address change, please address it to the attention of: **SSOM, ALERT-2G**. Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

Editor: Phil Lomax (405) 954-6487

FAX: (405) 954-4570 or (405) 954-4748

Mailing address: FAA, ATTN: AFS-640 ALERTS, P.O. Box 25082,
Oklahoma City, OK 73125-5029

E-Mail address: Phil_W_Lomax@mmacmail.jccbi.gov

You can access current and back issues of this publication from the internet at: <http://afs600.faa.gov>

When the page opens, select "AFS-640" and then "Alerts" from the drop-down menu. The monthly issues of the Alerts are available back to July 1996, with the most recent edition appearing first.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between October 25, 2001, and December 3, 2001, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION

Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFTMAKE ACFTMODEL REMARKS	ENG MAKE ENGMODEL	COMPMAKE COMPMODEL	PARTNAME PART NUMBER	PART CONDITION PART LOCATION	DIFF-DATE OPER CTRL NO.	T TIME TSO
LIFE VEST TYPE AV-2(A) MFG MARCH 1983 FAILED. MFG RECOMMENDED 2 PSI CELL TEST I/A/W 25-60-55.			LIFE VEST S5600AV2A	FAILED CABIN	09/14/2001 2001FA0000442	
		COLLINS	CONNECTOR 5546257001	CORRODED VERTICAL GYRO	08/14/2001 2001FA0000441	
EXCESSIVE CORROSION ON CONNECTOR BETWEEN PINS N,P, AND M. THIS RESULTED IN ATTITUDE INDICATOR FLAGGING AND SHOWING IMPROPER ATTITUDES.			BLADE S90AT2	CRACKED PROPELLER	09/13/2001 2001FA0000443	
MCAULEY BLADE PART S90AT-2 WITH SERIAL NUMBER OD044YSC WAS RECEIVED FOR OVERHAUL. BLADE TIMES ARE UNKNOWN. BLADE RECEIVED AS A SINGLE BLADE WITH FERRULE INSTALLED. AFTER FERRULE REMOVAL, DURING BLADE BUTT, FLORESCENT PENETRATE INSPECTION, BLADE WAS DISCOVERED CRACKED IN THE LAST THREAD, FORWARD SIDE, FROM 1:00 TO 5:00 O'CLOCK POSITION. BLADE WAS RED TAGGED.						

	TUBE 840118	CRACKED PROPELLER	09/11/2001 2001FA0000453	445
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PROPELLER WAS FOR RECEIVED FOR STANDARD 60 MONTH OVERHAUL. CURRENT PROPELLER TIMES ARE TTSN 445.0 AND TSO N/A. THIS IS THE PROPELLER'S FIRST OVERHAUL. DURING THE INSPECTION OF THE PROPELLER COMPONENTS, HUB PART NUMBER 840-118, SERIAL NUMBER EVA2042 WITH PILOT TUBE PART NUMBER B-4020 WAS FOUND CRACKED IN NR 1 BLADE POSITION, 1.00 INCH FROM THE HUB SHOULDER FROM 11:00 TO 1:00 POSITION. THE CRACKED PILOT TUBE WAS REMOVED AND REPLACED AND THE HUB CHECKED SERVICEABLE, AFTER REPAIR. THE CORRESPONDING BLADE, NR 1 CHECK SERVICEABLE WITH NO DEFECTS NOTED. PROPELLER WAS REASSEMBLED AFTER

	ALLSN 250C20J	COUPLING 6898977	CORRODED ENGINE	10/16/2001 HEEA076800
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N1 COUPLING HAS EXCESSIVE RUST CAUSING PITTING.

	GARRTT TFE7313	HONEYWELL GEARSHAFT 30702123	SEPARATED ENGINE	10/22/2001 2001FA0000460	7629
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83190 WAS REMOVED FROM SABRE 65 DUE TO AN IN-FLIGHT SHUTDOWN DURING CLIMB. TRANSFER HORIZONTAL BEVEL GEARSHAFT EXHIBITED SEPARATED GEAR TEETH, THUS CAUSING IFSD DUE TO NO AGB ROTATION.

	LYC HIO360D1A	BEARING SL13212M03	FAILED ENGINE	09/12/2001 2001FA0000472	331
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ENGINE WAS REMOVED DUE TO METAL CONTAMINATION. FOUND NR 3 CONNECTING ROD BEARING FAILED. THE ENGINE DID NOT EXHIBIT SIGNS OF OIL STARVATION. CAUSE FOR THIS FAILURE COULD BE DELAMINATION OF THE

	PWA PT6A34	HARTZL BEARING 1851	CRACKED PROPELLER ASSY	08/28/2001 2001FA0000431
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RELEVANT INDICATION.

AIRBUS A330322	PWA PW4168	4324442	O-RING NAS161228	FRETTED O-RING SURFACE	10/02/2001 CA011018006
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(CAN) A/C DEPARTED BRI(BARL) DESTINED FOR YYZ ON 2 OCT 2001. A/C EXPERIENCED LOSS OF YELLOW HYDRAULIC SYS, ECAM WARNING- HYD RSVR LO/HYD SYS LO PR, APPROX 1(ONE) HR INTO FLT. FLT CREW SECURED SYS AS PER THE AFM&DIVERTED FLT TO MAN (MANCHESTER, UK).UPON ARRIVAL IN MAN SKYSERVICE MAINT FOUND FLUID DRIPPING FROM #2 ENGINE THRUST REVERSER PYLON DRAIN TUBE. THRUST REVERSER HYDRAULIC FILTER ASSY FOUND TO BE WET WITH HYDRAULIC FLUID. FILTER ASSY DISASSEMBLED&FOUND O-RING FRETTED.O-RING REPL AS PER SB&YELLOW HYDRAULIC SYS CHECKED AS PER AMM 29-00900-280-803, YELLOW HYDRAULIC PUMP CASE DRAIN FILTERCHECKED NO ABNORMALITIES NOTED. THE SYS GROUND CHECKED SERVICEABLE. AIRCR

AMD FALCON50MYST	GARRTT TFE73131C	ENGINE	FLAMED OUT NR 1	11/15/2001 0115
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APPROX 30 MINUTES INTO FLIGHT AT FL 390 COCKPIT HEAT CONTROL WAS MOVED FROM MANUAL TO AUTO. SHORTLY AFTER NR 1 ENG FLAMED OUT. NO WARNING LIGHTS, NO VIBRATION. AN IMMEDIATE RELIGHT WAS PERFORMED AND SUCCESSFUL. ALL ENGINE PARAMETERS WERE NORMAL, FLIGHT CONTINUED TO DESTINATION.

AMRGEN AA1	LYC O235C	MUFFLER 0990D113	CRACKED ENGINE	09/04/2001 2001FA0000409	2330
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DURING ANNUAL INSPECTION, MUFFLER WAS FOUND CRACKED IN THE AREA WHERE TAIL PIPE IS WELDED TO CAN. 742 HOURS SINCE LASTINSPECTION. (ATTACHED PHOTOS)

AMRGEN AA1B	LYC O235C2C	GEAR 72979	WORN VACUUM PUMP	06/18/2001 2001FA0000401	3165
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REMOVE VACUUM PUMP DRIVE SHAFT GEAR, OIL LEAKING INTO VACUUM PUMP, WORN SPOT ON SHAFT DAMAGED OIL SEAL CAUSING OIL LEAK.

AMTR AVIDFLYERHH	ROTAX ROTAX532	SPARK PLUG NCKB8ES	BROKEN ENGINE	09/04/2001 2001FA0000407
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THE CERAMIC PORTION OF THE SPARK PLUG BROKE COMPLETELY AROUND AND ALLOWED THE SPARK PLUG WIRE TO FALL OFF WITH THE PIECE OF CERAMIC INSIDE THE WIRE AND CAP. ENGINE WOULD NOT MAINTAIN POWER ON 1 CYLINDER CAUSING FORCED LANDING AND DAMAGE TO AIRCRAFT.

AMTR CHRISEAGLE2	LYC IO360A1C	TIRE	FAILED LANDING GEAR	01/19/2001 2001FA0000408
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TIRE FAILURE, STRIPPED RIB. CAUSE: UNDETERMINED, PENDING EVALUATION BY MFG.

AMTR HEADWIND	FRNKLN 4AC176B*	GEAR 10068	BROKEN MAGNETO	10/03/2001 2001FA0000469	2000
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FOLLOWING TAKEOFF, AT ABOUT 200 FT. ENGINE FAILED. AIRCRAFT LANDED IN FIELD WITHOUT FURTHER INCIDENT. SUBSEQUENT INSPECTION REVEALED CAM GEAR, WHICH DRIVE BOTH MAGNETO GEARS, HAD SHATTERED. CAM GEAR IS MADE OF MICARTA (FIBER) MATERIAL.

AMTR LONGEZ	LYC O235L2C	SEAL	BLEW OUT ENGINE	02/23/2001 2001FA0000410	675
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ENGINE CRANKCASE BREATHER HOSE MAY HAVE ICED UP CAUSING CRANKCASE PRESSURE TO BUILDUP, BLOWING CRANKSHAFT SEAL OUT OF CRANKCASE. ALL ENGINE SEIZED UP AND QUIT. PILOT MADE AND EMERGENCY LANDING, NO DAMAGE TO AIRCRAFT.

BBAVIA 7GCBC	LYC O320*	SPAR	CRACKED RT WING	10/04/2001 2001FA0000415	2714
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WHILE INSPECTING WING SPARS IN COMPLIANCE WITH AD, THE FRONT SPAR IN THE RIGHT WING WAS FOUND TO HAVE A COMPRESSION CRACK AT THE BUTT END AND THE REAR SPAR IN THE LEFT WING WAS FOUND TO HAVE A LONGITUDINAL CRACK APPROXIMATELY 14 INCHES INBOARD FROM THE TIP.

BEECH 400A		MOUNT 45A34361005	CRACKED LT ENGINE	11/13/2001 RASFTYRK178	3367
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WHILE PERFORMING A ROUTINE SCHEDULED INSPECTION, INSPECTORS NOTED THE LT FORWARD ENGINE MOUNT BRACKET TO BE CRACKED APPROX 50 PERCENT THROUGH THE LOWER HALF.

BEECH 58P	CONT TSIO520*	THROTTLE 1023890091	CHAFED RTTHROTTLE	09/28/2001 2001FA0000398	242
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PILOT COMPLAINED, RIGHT THROTTLE VERY STIFF, THROTTLE HAD BEEN REPLACED FOUR MONTHS EARLIER FOR SAME REASON. UPON REMOVAL IT WAS DISCOVERED THAT THE CABLE, WHICH WAS COVERED WITH FIRE SLEEVE, HAD BEEN CHAFFING ON THE LOWER PART OF THE TURBOCHARGER COMPRESSOR HOUSING CLAMP, WHERE IT HAD CHAFFED THE CABLE HAD INDICATIONS OF BEING OVERHEATED. CABLE SHOULD HAVE BEEN ROUTED ABOVE THE EXHAUST WHERE IT WOULD HAVE BEEN PROTECTED BY THE EXHAUST HEAT SHIELD. WHEN REPLACING PARTS WITH NO CLEAR GUIDANCE ON ROUTING, NEED TO MAKE SURE TO FOLLOW INSTALLATION GUIDE.

BEECH F33A	CONT IO520BB	MAGNETO 6310	FAILED ENGINE	09/26/2001 2001FA0000405	497
MAGNETO REMOVED FROM ENGINE FOR 500 HOUR INSPECTION IN ACCORDANCE WITH THE MM. REMOVED THE REAR COVER OF MAGNETO AND FOUND A GRAY COLOR POWDER ON THE CAP AND AROUND THE COIL. THIS WAS FOUND ON THE MAGNETOS THAT HAD FAILED IN FLIGHT WITH ABOUT THE SAME FLIGHT TIME ON THEM. MFG WAS INFORMED					
BELL 206B3		SWITCH 7G547	FAILED FUEL PRESSURE	10/04/2001 HEEA076479	
FUEL PRESSURE SWITCH OPERATED CORRECTLY ON INSTALLATION - NEXT MORNING FUEL PUMP LIGHT CAME ON AND WOULD NOT GO OUT. REPLACED WITH SERVICEABLE SWITCH.					
BELL 206L1		ACTUATOR 206062721109	INOPERATIVE M/R CONTROL	10/03/2001 HEEA076438	
INOPERATIVE NO EXTENSION OR RETRACTION OF CONTROL SHAFT. REPLACED WITH SERVICEABLE ACTUATOR.					
BELL 206L1		GPS 13824120234	FAILED COCKPIT	10/11/2001 HEEA076583	
FAILED DUMPING ALL WAYPOINTS, RECEIVER AND BATTERY BACK UP FAIL KEPT FLASHING IN MESSAGE MODE. REPLACED WITH SERVICEABLE PART.					
BELL 206L1		CARTRIDGE 2C271	FAILED BOOST PUMP	10/31/2001 HEEA076983	
LT BOOST PUMP FUEL PRESSURE DROPPED TO ZERO, LT BOOST PUMP LIGHT ILLUMINATED. REPLACED WITH SERVICEABLE PART.					
BELL 206L1	ALLSN 250C30	GOVERNOR 252469211	MALFUNCTIONED ENGINE	10/04/2001 HEEA076457	13616
N2 DROOP TO 97 PERCENT. COMPLETED DROOP COMPENSATION ADJUSTMENTS AND COMPLETED OPERATIONAL CHECK. FOUND ACCEPTABLE. AFTER 2:45 ADDITIONAL FLIGHT HOURS REPORTED N2 DROOP TO 97 PERCENT WITH N2 OVERSPEED TO 102 PERCENT. REPLACED WITH SERVICEABLE GOVERNOR.					
BELL 206L3		CROSSTUBE 206323017	CORRODED MLG	10/03/2001 HEEA076440	
CORRODED BEYOND LIMITS AT SUPPORT MOUNT AREA. MEASURED .010 INCHES IN ZONE 1. REPLACED WITH SERVICEABLE CROSSTUBE.					
BELL 206L3		SKID 206324008	CRACKED MLG	10/04/2001 HEEA076442	
18 INCH CRACK AT LOWER SIDE SKID TUBE. REPLACED WITH SERVICEABLE SKID TUBE.					
BELL 206L3		STEP 206331119	CORRODED FUSELAGE	10/04/2001 HEEA076443	
INTERGRANULAR CORROSION BEYOND LIMITS AT MOUNT AREA. REPLACED WITH SERVICEABLE STEP.					
BELL 206L3		RESTRAINT 206011117003	STUCK MAIN ROTOR HEAD	10/03/2001 HEEA076434	
STICKS IN THE DOWN POSITION. REPLACED WITH SERVICEABLE PART.					
BELL 206L3		RESTRAINT 206011117003	STUCK MAIN ROTOR HEAD	10/03/2001 HEEA076435	
STICKING IN RETRACT POSITION. REPLACED WITH SERVICEABLE PART.					
BELL 206L3		VALVE 206040088005	MISMANUFACTURE MAIN ROTOR	10/03/2001 HEEA076436	
IMPROPERLY MANUFACTURED THREADS, CANNOT BE INSTALLED INTO TRANSMISSION CASE WITHOUT CAUSING DAMAGE TO CASE THREADS. TRIED TO INSTALL VALVE INTO TWO DIFFERENT CASES AND COULD NOT.					
BELL 206L3		SHUNT MS915872	FAILED GENERATOR	10/04/2001 HEEA076488	
GENERATOR LIGHT ILLUMINATED IN FLIGHT AND GEN. WOULD RESET. REPLACED WITH SERVICEABLE SHUNT.					
BELL 206L3		CROSSTUBE 206323006	CORRODED MLG	10/22/2001 HEEA076872	
MLG CROSSTUBE CORRODED.					
BELL 206L3		BOLT 206011135105	DAMAGED MAIN ROTOR	10/24/2001 HEEA076918	
NICKS IN THREADED AREA.					
BELL 206L3		FITTING 206030104023	CHAFED MLG FLOAT	10/31/2001 HEEA076972	
PART IS CHAFED. REPLACED WITH SERVICEABLE FITTING.					
BELL 206L3		FITTING 206033501004	CORRODED MAIN ROTOR	10/31/2001 HEEA076973	
FITTING IS CORRODED BEYOND LIMITS. REPLACED WITH SERVICEABLE PART.					
BELL 206L3		STOP 206033518007	DETERIORATED M/R GEARBOX	10/31/2001 HEEA076974	
DETERIORATION. REPLACED WITH SERVICEABLE PART.					
BELL 206L3		STRAP 206052105013	CORRODED MLG	10/31/2001 HEEA076975	
CORROSION. REPLACED WITH SERVICEABLE PART.					
BELL 206L3		CYLINDER 206076062003	LEAKING CYCLIC	10/31/2001 HEEA076976	
LEAKING BEYOND LIMITS ON END CAP SIDE OF SERVO. PENDING VENDOR REPAIR.					
BELL 206L3		SKID 206324007	CRACKED MLG	10/31/2001 HEEA077004	
BOTTOM OF SKID TUBE HAS A 20 INCH CRACK EXTENDING FROM BELOW WHEEL LUG AFT. THERE ARE TWO ADDITIONAL CRACKS IN THE SAME AREA. PENDING VENDOR REPAIR.					
BELL 206L3		MOUNT 206064107103	WORN ENGINE	11/02/2001 HEEA077038	292
ENGINE MOUNT LEG WORN BEARING BEYOND LIMITS. SENT TO BELL HELICOPTER TEXTRON FOR WARRANTY CREDIT ON BEHALF OF CUSTOMER U.S. WEST. REFERENCE: INVOICE AND DMR NO. 687181.					
BELL 206L3	ALLSN 250C30	BLEED VALVE 23005366	MALFUNCTIONED ENGINE	10/04/2001 HEEA076453	7023
HIGH TOT, DIDN'T CLOSE SMOOTHLY WHEN PRESSURE WAS APPLIED. REPLACED WITH SERVICEABLE BLEED VALVE.					
BELL 212		STARTER GEN 23032048	FAILED ENGINE	10/31/2001 HEEA076981	
RED GLOW WAS OBSERVED IN THE STARTER GENERATOR FOLLOWED BY SMOKE, STARTER NEVER ENGAGED. REPLACED WITH SERVICEABLE PART.					

BELL 212	PWA PT6T3	3033063	DIAPHRAGM	DAMAGED BLEED VALVE	10/04/2001 HEEA076464	
INCREASE OF 40 DEGREES ITT AND 4 PERCENT N1 AT POWER CHECK SETTINGS. FOUND HOLE IN DIAPHRAGM. REPLACED WITH SERVICEABLE DIAPHRAGM.						
BELL 214ST			STARTER 214060056103	MALFUNCTIONED ENGINE	11/02/2001 HEEA077037	
DISENGAGES DURING STARTING WITH GOOD BATTERIES.						
BELL 407			BEAM 400052007109	CORRODED MLG	10/02/2001 HEEA076331	
BEAM ASSY CORRODED AND BOLT HOLE WORN.						
BELL 407			BEAM 400052007115	CORRODED MLG	10/02/2001 HEEA076332	
BEAM CORRODED AROUND BUSHINGS. IN SHEETMETAL SHOP FOR REPAIR.						
BELL 407			BOLT 400052009101	CORRODED MLG	10/02/2001 HEEA076333	
PITTED THROUGH COATING. SCRAPPED AND REPLACED WITH SERVICEABLE BOLT.						
BELL 407			LINK 406012129101	WORN TAIL ROTOR	10/02/2001 HEEA076334	
ROD END BEARINGS WORN.						
BELL 407		406040500119	BEARING	FAILED SUPPORT	10/02/2001 HEEA076335	
ROLLER FELL OUT OF BEARING.						
BELL 407		406040500123	SEAL	LEAKING FREEWHEEL UNIT	10/02/2001 HEEA076336	
FRONT SEAL LEAKING.						
BELL 407			ROD END 406310404101	WORN MAIN ROTOR	10/02/2001 HEEA076338	3368
ROD END ASSY WORN.						
BELL 407			UNIVERSAL 406310405101	WORN MAIN ROTOR	10/02/2001 HEEA076339	1498
MAIN ROTOR UNIVERSAL WORN.						
BELL 407			DUCT 407062021101	CRACKED EXHAUST	10/02/2001 HEEA076352	
EXHAUST DUCT CRACKED.						
BELL 407			BEARING	NOISY T/R TRUNNION	10/03/2001 HEEA076353	2803
T/R TRUNNION BEARING CLICKS WHEN FLAPPED.						
BELL 407			DISC PACK 407340340101	CRACKED TAIL ROTOR DRIVE	10/03/2001 HEEA076356	
NR 3 SHORT SHAFT FWD COUPLING DISK PACK FOUND CRACKED.						
BELL 407			PRESSURE 407362013101	MALFUNCTIONED FUEL CELL	10/03/2001 HEEA076361	4129
TRANSFER LIGHT WILL NOT GO OUT.						
BELL 407			PRESSURE 407362013101	STUCK FUEL CELL	10/03/2001 HEEA076362	
PRESSURE SWITCH STUCK IN OFF POSITION.						
BELL 407			CARTRIDGE 1C2710	INOPERATIVE BOOST PUMP	10/03/2001 HEEA076386	
INOPERATIVE. REPLACED WITH SERVICEABLE BOOST PUMP CARTRIDGE.						
BELL 407			BLADE 407015001117	CRACKED MAIN ROTOR	10/03/2001 HEEA076394	3924
MAIN ROTOR BLADE IS CRACKED.						
BELL 407		407040302107	BEARING 407340339101	ROUGH T/R DRIVESHAFT	10/03/2001 HEEA076395	
TAIL ROTOR DRIVESHAFT BEARING ROUGH.						
BELL 407			INDICATOR 407375005101	MALFUNCTIONED XMSN OIL TEMP	10/03/2001 HEEA076399	
TRANSMISSION OIL TEMP INDICATOR SHOWED ONLY 2 BAR SEGMENTS.						
BELL 407			ADI 50400179015	FAILED COCKPIT	10/03/2001 HEEA076400	
FLAG DOES NOT PULL AND GAUGE DOES NOT CORRESPOND TO ATTITUDE. REPLACED WITH SERVICEABLE ATTITUDE						
BELL 407			ADI 50400179015	FAILED COCKPIT	10/03/2001 HEEA076401	
ATTITUDE INDICATOR STAYS IN LEFT TURN. REPLACED WITH SERVICEABLE ATTITUDE IND.						
BELL 407			CROSSTUBE 407050201101	CORRODED MLG	10/03/2001 HEEA076404	
FORWARD CROSSTUBE HAS CORROSION. SCRAPPED AND REPLACED WITH SERVICEABLE CROSSTUBE.						
BELL 407			CROSSTUBE 407050202101	CORRODED MLG	10/03/2001 HEEA076405	
AFT CROSSTUBE HAS CORROSION. SCRAPPED AND REPLACED WITH SERVICEABLE CROSSTUBE.						
BELL 407			PANEL 407070620138	CRACKED CREW DOOR	10/03/2001 HEEA076409	
SEVERAL CRACKS. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.						
BELL 407			PANEL 407070620143	CRACKED CARGO DOOR	10/03/2001 HEEA076410	
LITTER DOOR PANEL CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.						
BELL 407			PANEL 407070620157	CRACKED CARGO DOOR	10/03/2001 HEEA076411	
LT REAR DOOR PANEL HAS NUMEROUS CRACKS. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.						

BELL	PANEL	CRACKED	10/03/2001	
407	407070620157	CREW DOOR	HEEA076412	
DOOR TRIM PANEL CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.				
BELL	PANEL	CRACKED	10/03/2001	
407	407070620157	CREW DOOR	HEEA076413	
LT PASSENGER DOOR PANEL CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.				
BELL	PANEL	CRACKED	10/03/2001	
407	407070620158	CREW DOOR	HEEA076414	
CRACKED PANEL. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.				
BELL	PANEL	CRACKED	10/03/2001	
407	407070620158	CARGO DOOR	HEEA076415	
RT REAR DOOR PANEL CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.				
BELL	PANEL	CRACKED	10/03/2001	
407	407070620179	CREW DOOR	HEEA076416	
DOOR PANEL CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.				
BELL	PANEL	CRACKED	10/03/2001	
407	407070620180	DOOR FRAME	HEEA076417	
PILOT DOOR POST TRIM PANEL CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.				
BELL	PANEL	CRACKED	10/03/2001	
407	407070620217	CREW DOOR	HEEA076419	
PANEL CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.				
BELL	PANEL	CRACKED	10/03/2001	
407	407070620218	CREW DOOR	HEEA076420	
PANEL CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.				
BELL	COVER	CRACKED	10/03/2001	
407	407070620205	CARGO DOOR	HEEA076421	
LITTER DOOR LATCH COVER CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE COVER.				
BELL	PANEL	CRACKED	10/03/2001	
407	407070620218	CREW DOOR	HEEA076422	
PANEL CRACKED. SCRAPPED AND REPLACED WITH SERVICEABLE PANEL.				
BELL	SEAT	CRACKED	10/03/2001	
407	407070622115	ARMREST	HEEA076423	
LT AFT FACING SEAT ARM REST FABRIC TORN. SCRAPPED AND REPLACED WITH SERVICEABLE ARM REST.				
BELL	LINK	WORN	10/12/2001	
407	406312103101	TAIL ROTOR	HEEA076611	
BEARING WORN. TO BE SENT TO BELL HELICOPTER TEXTRON FOR CREDIT AGAINST REPLACEMENT PART PURCHASED.				
BELL	LINK	WORN	10/12/2001	
407	406312103101	TAIL ROTOR	HEEA076612	
BEARING WORN.				
BELL	BEARING	WORN	10/12/2001	
407	407012101111 407312100101	TAIL ROTOR HUB	HEEA076613	
WORN ELASTOMER. TO BE SENT TO BELL HELICOPTER TEXTRON FOR CREDIT AGAINST REPLACEMENT PART PURCHASED. LABOR CREDIT ACCOMPLISHED ON J0188327-WA (INVOICE AND DMR NO. 687168).				
BELL	BEARING	STUCK	10/05/2001	
407		LINK ASSY	HEEA076500	
STICKING BEARING. SENT TO BELL HELICOPTER TEXTRON FOR CREDIT AGAINST REPLACEMENT PART PURCHASED. REFERENCE: DMR#720438.				
BELL	ADAPTER	WORN	10/05/2001	
407	406040316101	ENG XMSN COUP	HEEA076506	
WORN SPLINES. SENT TO BELL HELICOPTER TEXTRON FOR CREDIT AGAINST REPLACEMENT PART PURCHASED. REFERENCE: DMR#720545.				
BELL	HOUSING	CRACKED	10/05/2001	
407	206061432121	COOLER BLOWER	HEEA076508	
COOLER BLOWER HOUSING CRACKED AND RIVETS WORKING.				
BELL	SWASHPLATE	DAMAGED	10/11/2001	1861
407	406010401117	MAIN ROTOR	HEEA076567	
SWASHPLATE SEAL SPINNING IN CAP.				
BELL	BEARING	WORN	10/11/2001	1146
407		TAIL ROTOR HUB	HEEA076572	
TAIL ROTOR HUB HAS A WORN BEARING.				
BELL	TRANSMITTER	FAILED	10/10/2001	
407	222375077113	ENGINE OIL	HEEA076537	
ENGINE PRESSURE DROPPED TO ZERO. SENT TO BELL HELICOPTER TEXTRON FOR CREDIT AGAINST REPLACEMENT PART PURCHASED. REFERENCE: DMR#720488.				
BELL	BLADE	CRACKED	10/10/2001	4173
407	407015001117	MAIN ROTOR	HEEA076557	
MAIN ROTOR BLADE CRACKED AT OUTBOUND TRIM TAB.				
BELL	TRANSMISSION	MAKING METAL	10/10/2001	1594
407	407040006107	MAIN ROTOR	HEEA076558	
MAIN ROTOR TRANSMISSION MAKING METAL.				
BELL	BEARING	FAILED	10/16/2001	
407	407340339103	MAIN ROTOR	HEEA076806	
BEARING INNER RACE TURNING ON SHAFT JOURNAL.				
BELL	BEARING	FAILED	10/16/2001	
407	407340339103	MAIN ROTOR	HEEA076808	
BEARING INNER RACE TURNING ON SHAFT JOURNAL.				
BELL	SHAFT	FAILED	10/16/2001	
407		COOLER BLOWER	HEEA076814	
IN CRUISE, AIRCRAFT DEVELOPED SEVERE VERTICAL VIBRATION. FOUND FORWARD BEARING ON NR 2 TAIL ROTOR OIL COOLER BLOWER SHAFT FAILURE.				

BELL	HUB	WORN	10/24/2001	1765
407	407012101111	TAIL ROTOR	HEEA076906	
WORN ELASTOMERIC BEARING. TO BE SENT TO BELL HELICOPTER TEXTRON FOR CREDIT AGAINST REPLACEMENT PART PURCHASED.				
BELL	HARNES	FAILED	10/24/2001	
407	407076508103	INSTRUMENT	HEEA076907	
PEDAL STOP SWITCH DAMAGED BY INTERFERENCE WITH INSTRUMENT PANEL FRAME.				
BELL	BRAKE	LEAKING	10/23/2001	3152
407	206340301103	MAIN ROTOR	HEEA076878	
ROTOR BRAKE IS DAMAGED AND LEAKS.				
BELL	HOUSING	CRACKED	10/24/2001	
407	206061432121	BLOWER	HEEA076891	
BLOWER HOUSING CRACKED.				
BELL	BRAKE	WORN	10/24/2001	2496
407	206340301103	ROTOR	HEEA076894	
FOUND EXCESSIVE WEAR ON HOUSING, BRAKE PAD BOLT RETAINER HOLES AND PAD RETAINER BOLTS. OVERHAULED, MODIFIED, TESTED AND RETURNED TO AIRCRAFT.				
BELL	VALVE	FAILED	10/31/2001	
407	206063640109	FUEL SHUT OFF	HEEA077007	
FUEL SHUT OFF VALVE MAKING GRINDING NOISE. REPLACED WITH SERVICEABLE VALVE.				
BELL	VALVE	STUCK	10/31/2001	
407	206063640109	FUEL SYSTEM	HEEA077008	
INOPERATIVE - STUCK IN THE MID TRAVEL POSITION. TO BE SENT TO BELL HELICOPTER TEXTRON FOR CREDIT AGAINST REPLACEMENT PART PURCHASED.				
BELL	BEARING	WORN	10/04/2001	
412	212061101001	ENGINE CONTROLS	HEEA076447	
WORN BEARING. REPLACED WITH SERVICEABLE BEARING.				
BELL	INDICATOR	MALFUNCTIONED	10/04/2001	
412	212070262101	COCKPIT	HEEA076448	
PRESSURE NEEDLE STICKS AFTER START UP ONLY SHOWS PRESSURE IF GAUGE IS TAPPED. REPLACED WITH SERVICEABLE INDICATOR.				
BELL	SERVO	STIFF	10/04/2001	
412	212076005111	TAIL ROTOR	HEEA076451	
MOVEMENTS ARE STIFFENED AND VERY HARD TO MOVE. REPLACED WITH SERVICEABLE SERVO.				
BELL	GPS	FAILED	10/11/2001	
412	8143902240B	COCKPIT	HEEA076600	
WHEN UNIT IS TURNED ON, POWERS UP FOR APPROX. 15 SECONDS TO ONE MINUTE THEN GOES BLANK. REPLACED WITH SERVICEABLE PART.				
BELL	CROSSTUBE	CORRODED	10/04/2001	3378
412	412050045107	MLG	HEEA076473	
CORRODED IN SEVERAL AREAS BEYOND LIMITS. THE CORRODED AREAS ARE NEAR THE SKID MOUNTS TO 18" TOWARD THE CENTER. RETURNING FOR CREDIT.				
BELL	INVERTER	FAILED	10/30/2001	
412		ELECTRIAL	HEEA076970	
NR 1 INVERTER DROPPED OFF LINE AND ELECTRICAL FUMES WERE NOTED BY PILOT. FOUND BURNED WIRE IN WINDSHIELD POST COVER AT TOP OF POST.				
BELL	VENT	LEAKING	10/30/2001	
412	AE89411M	FUEL SYSTEM	HEEA076971	
HAD STRONG FUEL ODOR IN COCKPIT. FOUND A SMALL AMOUNT OF FUEL HAD SEEPED THROUGH THE RT EXTERNAL TANK VENT DUE TO HIGH FUEL LEVEL AND THE ATTITUDE OF THE AIRCRAFT.				
BELL	LINK	DAMAGED	10/31/2001	
412	412010405109	MAIN ROTOR	HEEA076988	
SPUN BEARING. REPLACED WITH SERVICEABLE PART.				
BELL	BRAKE	WORN	10/31/2001	
412	94501031	MAIN ROTOR	HEEA076993	
PUCKS WORN AND BROKEN MICRO SWITCH. REPLACED WITH SERVICEABLE PART.				
BELL	RADAR	CONTAMINATED	10/31/2001	
412	MI585202	WX SYSTEM	HEEA076999	
WEATHER RADAR HAS GAPS IN DISPLAY, FLUTTER WHILE SWEEPING. FOUND WATER IN UNIT. REPLACED WITH SERVICEABLE PART.				
BELL	BUSHING	WORN	10/31/2001	
412		TAIL ROTOR	HEEA077000	
WORN BUSHINGS AND BEARINGS. REPLACED WITH SERVICEABLE PART.				
BELL	CONNECTOR	SHORTED	10/31/2001	
412	MS3108R14S5S	NR 2 ENGINE	HEEA077001	
FUEL VALVE LIGHT CAME ON. MAINTENANCE FOUND SHORTED CANNON PLUG AT NR 2 ENGINE LORI VALVE CAUSING FUEL VALVE TO CYCLE.				
BELL	PIN	LOOSE	10/31/2001	
412	212001139001	NR 2 ENGINE	HEEA077002	
COPILOT THROTTLE WOULD NOT CONTROL THE NR 2 ENGINE. MAINTENANCE FOUND PIN CONNECTING COPILOT THROTTLE GRIP TO SHAFT IN COLLECTIVE STICK TO HAD BACKED OUT. REINSTALLED PIN.				
BELL	PWA	FUEL CONTROL	10/04/2001	
412	PT6T3B	ENGINE	HEEA076466	
ENGINE SURGING DURING POWER CHANGES CAUSING AIRCRAFT TO YAW. REPLACED WITH SERVICEABLE FUEL				
BELL	PWA	FUEL CONTROL	10/11/2001	
412	PT6T3B	ENGINE	HEEA076595	
CAUSING TORQUE OSCILLATIONS OF 10-15 PERCENT AT A HOVER. REPLACED WITH SERVICEABLE PART.				
BELL	PWA	ENGINE	11/01/2001	
412	PT6T3B	NR 2	HEEA077035	
SHORTLY AFTER DEPARTURE, IN CRUISE, PILOT HEARD SQUEAL, BANG AND LOW RPM AUDIO. NOTED NR 2 ENGINE FAILED. SECURED ENGINE AND COMPLETED FLIGHT WITH RUN ON LANDING.				

BLANCA 14193A	CONT IO470*	STRUCTURE	DETERIORATED WING	08/29/2001 2001FA0000413	2619
DURING ANNUAL INSPECTION, IN THE AREA OF THE WING WALK, WOOD DETERIORATION WAS FOUND AT THE AFT, 1B UPPER SKIN SEPARATED FROM THE FORWARD EDGE, OB EDGE AND AFT TRAILING EDGE, THE ENTIRE WING WALK AREA FABRIC WAS LOOSE FROM THE STRESSED SKIN PANELS THE OWNER THEN, NOT BELIEVING SB REQUIRED AND NOT WILLING TO PROPERLY REMOVE THE EFFECTED SKIN, A CABINET MAKER AND HIMSELF SLIP IN ON AN OFF DAY. THE DAMAGE THAT WAS DONE TO THE SPAR THREE DIFFERENT SPOTS AT WS 6 TO WS 10.5 SEVERELY DAMAGED THE SPAR DUE TO COMPRESSION CAUSED BY THE CHISEL. WHAT WAS TO BE SKIN CHANGE, NOW INCLUDES SPAR CHANGE/SPLICE. SENT PICTURES TO MFG WAS INFORMED DAMAGE WAS SEVERE.					
BOLKMS BK117A1		BLADE 117150041	DELAMINATED MAIN ROTOR	09/25/2001 2001FA0000451	6969
M/R BLADE WAS RECEIVED FOR INSP AND EVAL. ABRASION STRIP CRACK WAS IDENTIFIED AT BLADE STATION 2305. PORTION OF ABRASION STRIP WAS REMOVED TO ALLOW EVALUATION OF UNDERLYING SURFACE. SKIN WAS ALSO CRACKED WITH DELAMINATION SURROUNDING AREA. REVIEW OF BLADE RECORDS INDICATE THAT MFG PERFORMED REPAIR ON INNER WEIGHT 1 AND 2, CRACK IN ABRASION STRIP FROM ADRILL MARK ON INSIDE OF ABRASION STRIP IN AREA OF THIS REFERENCED REPAIR. REPAIR PERFORMED BY MFG IS FOR INSTALLATION OF PINS THROUGH INNER WEIGHTS 1 AND 2. THREE DRILL MARKS ON INSIDE SURFACE OF ABRASION STRIP THAT LINE UP WITH PINS INSTALLED					
BOLKMS BK117A1		ACTUATOR 1564T1005	MALFUNCTIONED NR 2 RPM	10/31/2001 HEEA077046	
AFTER STARTING BOTH ENGINES, NR 2 RPM COULD NOT BE INCREASED OR DECREASED WITH BEEP SWITCH. REPLACED ACTUATOR.					
CESSNA 152	LYC O235L2C	CARBURETOR	DEFECTIVE ENGINE	10/04/2001 2001FA0000454	
PILOT TOOK OFF IN AIRCRAFT, TURNED DOWNWIND AND ENGINE STARTED RUNNING ROUGH AND LOSING POWER. PILOT LANDED AC AND ENGINE QUIT AS HE PULLED OFF RUNWAY. ALL SYSTEMS CHECKED POINTED TO INSTALLED NEW REBUILT CARBURETOR AND ENGINE FUNCTIONED NORMALLY. PROBABLE CAUSE FLOAT STICKING IN CARBURETOR. RECOMMENDATIONS TO PREVENT RECURRENCE. CARBURETOR RETURNED TO MFG FOR EVALUATION.					
CESSNA 182S	LYC IO540*	SWITCH S28701	FAILED COCKPIT	10/04/2001 2001FA0000411	
PUSH TO TALK SWITCH FAILED AFTER 1 HOUR OF OPERATION. HAS HAPPENED FOUR TIMES IN A ROW.					
CESSNA 208B	PWA PT6A11	MOUNT 265102215	CRACKED ENGINE	10/01/2001 2001FA0000404	
DURING NON ROUTINE INSPECTION OF ENGINE MOUNT, A CRACK WAS FOUND IN THE WELD OF THE LOWER RIGHT ATTACH POINT (RING TO AIRCRAFT SUPPORT) SHIMMY DAMPENER WAS IN GOOD CONDITION WITH NO LEAKS DETECTED. NOSE GEAR BUSHINGS WERE ALSO SATISFACTORY.					
CESSNA 208B	PWA PT6A114A	GCU 51539012N	GCU	10/18/2001 CA011019001	
(CAN) DURING CRUISE, PILOT NOTICED STANDBY POWER ON ANNUNCIATOR FLASHING FOLLOWED SHORTLY BY THE STANDBY POWER INOP ANNUNCIATOR ON STEADILY. THIS WAS FOLLOWED BY THE GENERATOR OFF ANNUNCIATOR ILLUMINATING. BOTH GENERATOR POWER AND STANDBY POWER COULD BE RETURNED ON LINE BY CYCLING THE STANDBY POWER SWITCH AND THE GENERATOR RESET SWITCH. SYSTEM WAS TESTED ON THE GROUND WITH A MIN/MAX RECORDING VOLT METER. EACH ILLUMINATION OF THE ANNUNCIATOR LIGHT CORRESPONDED WITH A VOLTAGE SPIKE TO 34+ VOLTS. GENERATOR CONTROL UNIT WAS REPLACED AND SYSTEM CHECKED NORMALLY.					
CESSNA 414A	CONT TSIO520*	LINE 5100106159	CHAFED BRAKE SYS	08/15/2001 2001FA0000456	4094
RIGHT BRAKE LINE HAD A HOLE CHAFFED IN IT FROM BEING IN CONTACT WITH THE LINE HEATER DUCT LINE UNDER THE CO-PILOTS SEAT. THE BRAKE LINE RUNS UNDER THE HEAT DUCT AND IS VERY DIFFICULT TO SEE. THIS IS AN					
CESSNA 421B	CONT GTSIO520C	CYLINDER	MALFUNCTIONED ENGINE	10/17/2001 2001FA0000462	
LEFT ENGINE EXPERIENCED A VIBRATION. PILOT ELECTED TO LAND. REPLACED NR 2 CYLINDER. CLEANED VALVE GUIDES ON REMAINING CYLINDERS. REPLACED SPARK PLUG ON NR 1 CYLINDER. FLIGHT CHECK GOOD.					
CESSNA 421B	CONT GTSIO520F	NUT AN310S	FAILED RT MLG	08/30/2001 2001FA0000417	149
AIRCRAFT WAS TAXING FROM THE MAIN RUNWAY TO THE GATE, PILOT FELT AND HEARD BUMPING NOISE UPON MAKING A RIGHT TURN. AS HE WAS MAKING RIGHT TURN ONTO RAMP TORQUE LINKS SEPARATED CAUSING THE RIGHT WHEEL AND PISTON ASSEMBLY TO ROTATE ABOUT 135 DEGREES, CAUSING DAMAGE TO THE TO THE OB GEAR DOOR. THE NUT STRIPPED ITS THREADS, SHEARED THE COTTER KEY AND DEPARTED THE AIRCRAFT. BOLT REMAINED IN UPPER TORQUE LINK. NEW MLG SCISSORS WASHER REPLACEMENT KIT WAS INSTALLED, KIT DOES NOT INCLUDE A NEW NUT AND SUGGEST USING OLD NUT. NEW NUT WAS USED. THE LEFT GEAR BOLT WAS INSPECTED AND FOUND NUT WAS WOBBLY ON BOLT THREADS. NEW KITS AND NUT WERE INSTALLED ON BOTH SIDES.					
CESSNA 421B	CONT GTSIO520K	GEAR 51152401	DAMAGED FLAP ACTUATOR	03/29/2001 2001FA0000468	3100
ON FINAL, THE FLAPS MADE A LOUD POPPING SOUND. REMOVE FLAP ACTUATOR AND FOUND THAT THE GEAR BOX HAD ONE GEAR WITH THE TEETH MISSING.					
CESSNA 500CESSNA	PWA JT15D1A	CESSNA 3P639CP589BL	WIRE 3P639CP589BH	SHORTED SPLICE	09/20/2001 CA011018024
(CAN) DURING A ROUTINE FLIGHT, ON ARRIVAL AT YYZ #2 INVERTER FAILED. SYSTEM WAS CHECKED AND FINDINGS WERE THAT THE 115 VAC OUTPUT FOR THE R/H BUS, RUNNING BETWEEN THE INVERTER AND THE FRONT PRESSURE BULKHEAD THE WIRE WAS FOUND SHORTED. THERE WAS EVIDENCE OF CORROSION AND ARCING ADJACENT TO A CRIMP SPLICE IN WIRE #3P639-CP589BH. (SEE ACCOMPANYING DIAGRAM). IT APPEARS THAT THE INSULATION MAY HAVE BROKEN DOWN ON ONE WIRE ADJACENT TO THE SPLICE, WHICH CAUSED A SHORT CIRCUIT AND ARCING WHICH CONTINUED TO DETERIORATE THE INSULATION, CAUSING FAILURE IN THE CIRCUIT.					
CESSNA 550	PWA JT15D4	STATOR 1138932	BROKEN RT MLF BRAKE	08/28/2001 2001FA0000400	
FOLLOWING A NORMAL LANDING AND ROLL OUT FOR A RIGHT TURN ON TO THE TAXI WAY THE RIGHT MAIN WHEEL LOCKED UP. AFTER JACKING THE MAIN WHEEL AND PULLING THE TIRE, A PIECE OF STATOR WAS FOUND COMPLETE BROKEN OUT OF THE STATOR CAUSING THE WHEEL TO LOCK. THIS BRAKE ASSY AND THE LEFT HAD BOTH BEEN CHANGED AT THE SAME TIME. SB AND MFG WERE DONE ELIMINATING THE NEED TO SEPARATE THE BRAKE ASSYS FOR INSPECTION. AS CAN BE SEEN BOTH STATORS WERE CLOSE TO FAILURE. THE LEFT ASSY WAS OPENED UP AND STATORS WERE CRACKED TO POINT WHERE FAILURE WAS MATTER OF TIME. BOTH BRAKES HAD 585 LANDINGS.					
CESSNA P206D	CONT IO520*	BRACKET	MISMANUFACTURE AILERON PULLEY	09/01/2001 2001FA0000399	
DURING ANNUAL INSPECTION, THE ABSENCE OF THE SAFETY COTTER PIN (-23) WAS NOTED (PORT SIDE) (AILERON PULLEY BRACKET) CONSTRUCTION OF THE BRACKET WAS SUCH THAT A COTTER PIN COULD NOT HAVE BEEN INSERTED AT THE FACTORY. (SEE DIAGRAM)					

CESSNA R182	LYC O540*	FUEL STRAINER 07560058	BACKED OUT FUEL SYSTEM	09/21/2001 2001FA0000414	5648
DURING ANNUAL INSPECTION NOTICED FUEL STRAINER STANDPIPE HAD BACKED OUT AND WAS ABLE TO PULL IT OUT OF TOP ASSEMBLY WITH FINGERS.					
CESSNA R182	LYC O540*	CLAMP 22430151	BENT NLG	10/11/2001 2001FA0000416	2954
NOSE GEAR FAILED TO EXTEND, BUT FELL OUT WHEN AIRCRAFT WAS LIFTED FROM RUNWAY. ON JACKS, GEAR OPS WAS NORMAL. THIS CLAMP WAS BENT WHICH MAY HAVE ALLOWED SHIMMY DAMPENER TO JAM THE GEAR. MAY HAVE BEEN DAMAGED FROM TUG OVER TURNING THE GEAR.					
CESSNA T210M	CONT TSIO520*	CYLINDER SA643766	OUT OF ENGINE	09/28/2001 2001FA0000459	336
CUSTOMER COMPLAINED OF INTERMITTENT ROUGHNESS. REMOVAL OF CYLINDERS REVEALED STICKING INTAKE VALVES. GUIDE TO VALVE TOLERANCE TOO TIGHT, BELOW MFG MINIMUM LIMITS. MFG CLAIMS TOLERANCE TOO TIGHT FROM NORMAL OPERATION. NO BUILD UP NOTED OF ANY KIND ON VALVE STEM OR INSIDE DIAMETER OF VALVE GUIDE. TOLERANCE WAS INCORRECTLY MACHINED AT PART/ CYLINDER MANUFACTURE OR ASSEMBLY. RECOMMEND DISASSEMBLY AND INSPECTION OF NEW CYLINDER ASSEMBLIES TO CHECK TOLERANCES.					
CESSNA TU206G	CONT TSIO520*	LIFTER SA628488	SPALLED ENGINE	09/28/2001 2001FA0000458	326
DURING ROUTINE OIL CHANGE, METAL WAS FOUND IN FILTER. ENGINE WAS REMOVED AND DISASSEMBLED. CAUSE WAS FOUND TO BE LIFTER FACE AND CAM LOBE SPALLING ON CYLINDER CAM LOBES NR5 AND NR6 INTAKE. NO CORROSION NOTED. TWO OTHER INTAKE LIFTERS EXHIBIT PREMATURE WEAR, REMAINING CAM LOBES CHECK. OKAY FOR WEAR. CAMSHAFT WAS INSTALLED.					
EXTRA EA400	CONT TSIOL550C	OIL FILTER	CHAFED ENGINE	10/02/2001 2001FA0000402	
AIRCRAFT EXPERIENCED AT TOTAL ENGINE FAILURE DUE TO LOSS OF OIL PRESSURE. THE CAUSE WAS TO A B-NUT ON A T-FITTING LOCATED ON THE METERED PRESSURE TEST PORT FOR THE THROTTLE BODY HAD WORN A HOLE THRU THE OIL FILTER HOUSING. THE THROTTLE HOUSING IS MOUNTED ON RUBBER TUBING AND MOVES THRU VIBRATION AND MAKING CONTACT. THERE NEEDS TO BE MORE CLEARANCE BETWEEN THE FITTING AND OIL FILTER.					
GROB G102IIIIB		ELEVATOR	FLUTTER TAIL	09/24/2001 2001FA0000463	
WHILE CRUISING IN LEVEL FLIGHT AT 100 KTS, INDICATED, 5000 MSL, THE PILOT INITIATED A CLIMB ESTIMATED BETWEEN 2.0-2.5 G'S. AS SOON AS THE CLIMB WAS INITIATED FLUTTER WAS NOTED IN THE PITCH MOTION OF THE STICK (ELEVATOR FLUTTER). BACK PRESSURE WAS RELAXED AND THE FLUTTER STOPPED. THE GLIDER LANDED WITHOUT FURTHER INCIDENT. GLIDER IS CURRENTLY BEING EXAMINED AT MFG.					
MAULE MT7235	LYC IO540W1A5	CYLINDER	SEPARATED ENGINE	10/09/2001 2001FA0000455	
CRUISE FLIGHT. SUSPECT MFG DEFECTIVE CYLINDER WALL. NITRIDE CYLINDER. CYLINDER SEPARATION.					
MOONEY M20J	LYC IO360A1A	EXHAUST	BROKEN NR 1 CYLINDER	07/31/2001 2001FA0000403	1964
NR 1 CYLINDER BROKEN, AN EXHAUST VALVE WHICH DESTROYED THE PISTON AND CYLINDER HEAD. ALSO, FOUND NR 1 INTAKE TUBE SEALPN 77569, TORN AND TWISTED WHICH COULD HAVE CAUSED A LEAN MIXTURE ON THAT					
MOONEY M20K	CONT TSIO360LB	TAB 6422209052	BROKEN ENGINE	08/30/2001 2001FA0000412	65
SECURING/ATTACHING TAB WELDED TO EXHAUST RISER ASSEMBLY FOR CYLINDER NR 4 BROKE OFF CAUSING SUDDEN LOSS OF ENGINE MANIFOLD PRESSURE AND POWER RESULTING IN IMMEDIATE LANDING OF AIRCRAFT. (NR 4 CYLINDER RISER SEPARATED FROM NR 6 RISER WHEN TAB BROKE.					
PIPER PA23250	LYC O540*	BLADE V8433N10	CRACKED PROPELLER	10/22/2001 2001FA0000492	
CRACK FOUND IN BLADE SHANK BETWEEN TWO SHOULDERS APPROX 2 INCHES IN LENGTH. THREE HUNDRED HOURS EST SINCE LAST INSPECTION.					
SKRSKY S61N		GENERATOR 28B135145AM	FAILED NR 2 ENGINE	11/01/2001 2001FA0000485	363
A BURNING SMELL WAS DETECTED IN FLIGHT. FOLLOWED BY THE NR 2 AC GEN DROPPING OFF-LINE. THE REST OF THE FLIGHT CONTINUED NORMALLY.					
SKRSKY S76A		BLADE 7615009100041A	CRACKED MAIN ROTOR	10/31/2001 HEEA076941	12595
LEADING EDGE TITANIUM STRIP HAS A COMPLETE CHORDWISE CRACK WITH MULTIPLE BRANCH WHICH EXTENDS BEYOND LIMITS. PENDING VENDOR REPAIR.					
SKRSKY S76A		BLADE 7615009100053	DAMAGED MAIN ROTOR	10/31/2001 HEEA076943	5266
TRAILING EDGE DAMAGE AT AREA OF P/N - S/N STENCIL. REPLACED WITH SERVICEABLE BLADE.					
SKRSKY S76A		GEAR 7635109045102	MISMANUFACTURE M/R GEARBOX	10/31/2001 HEEA076944	
RIVET NOT INSTALLED IN GEAR. RIVET REQUIRED TO PREVENT OIL FROM LEAKING. PENDING VENDOR REPAIR.					
SKRSKY S76A		TRANSMISSION 7635109500043	MAKING METAL MAIN ROTOR	10/31/2001 HEEA076945	10333
CHIP LIGHT ON LANDING. INSPECTED AND FOUND A 1/2" BY 3/16" PIECE OF A GEAR TOOTH ON THE LEFT CHIP PLUG. REPLACED WITH SERVICEABLE ASSEMBLY.					
SKRSKY S76A		LIGHT 7655002005101	MALFUNCTIONED SEARCH LIGHT	10/31/2001 HEEA076946	
WILL NOT MOVE UP OR DOWN. REPLACED WITH SERVICEABLE PART.					
SKRSKY S76A		BLADE 7610105101041	CORRODED TAIL ROTOR	10/31/2001 HEEA076937	8350
CORROSION ON BOX BEAM AND TRAILING IS SPLIT OPEN ON PADDLE "B". PENDING VENDOR REPAIR.					
SKRSKY S76A		SPINDLE 7610208500046	BINDING MAIN ROTOR	10/31/2001 HEEA076938	
DROOP STOP BINDS UP WHEN INSTALLED. FOUND WHEN TORQUEING UP SPINDLE. A BIND PREVENTS THE DROOP STOP FROM RETURNING TO STATIC POSITION AT SHUTDOWN. IT IS FREE TO MOVE WHEN NOT INSTALLED. PENDING					
SKRSKY S76A		TIP CAP 7615009043050	CRACKED MAIN ROTOR	10/31/2001 HEEA076939	
OUTER DOUBLER ON LOWER SIDE CRACKED AND HAS "C" CHANNEL DEBONDED. PENDING VENDOR REPAIR.					

SKRSKY	ALLSN	LEAD	FRAYED	10/31/2001	
S76A	250C30S	9550166530	IGNITER	HEEA076948	
FRAYED AND WORN. REPLACED WITH SERVICEABLE PART.					
SKRSKY	ALLSN	GENERATOR	CORRODED	10/31/2001	
S76A	250C30S	9550176020	IGNITER	HEEA076951	
CORROSION. REPLACED WITH SERVICEABLE PART.					
SKRSKY		TIP CAP	CRACKED	10/31/2001	
S76C		7615009043054	MAIN ROTOR	HEEA076940	
FIBERGLASS SKIN NEAR THE TRAILING EDGE IS CRACKED AND HAS SOME SEPARATION NEXT TO THE ABRASION STRIP. PENDING VENDOR REPAIR.					
SKRSKY	TMECA	ENGINE	LEAKING	10/25/2001	1306
S76C	ARRIEL1	0292005310	NACELLE	HEEA076803	
LOW POWER, LEAKING.					
SKRSKY	TMECA	THERMOCOUP	WORN	10/19/2001	
S76C	ARRIEL1A	9550176740	ENGINE	HEEA076802	
WORN PROBES.					
SNIAS		HOSE	TORN	10/04/2001	88
AS350B		704A34415099	BLEED AIR	HEEA076623	
TORN. PENDING VENDOR RETURN FOR CREDIT.					
SNIAS		BEARING	WORN	10/04/2001	
AS350B		EMRL8RSP3C	MAIN ROTOR	HEEA076625	
WORN ROD END BEARINGS ON MAIN ROTOR SERVOS. PENDING VENDOR RETURN FOR CREDIT.					
SNIAS		INDICATOR	WORN	10/04/2001	
AS350B		56375600010	COCKPIT	HEEA076629	
ERRATIC INDICATIONS. SENT TO AMERICAN EUROCOPTER CORP. FOR CREDIT AGAINST REPLACEMENT PART PURCHASED. REFERENCE: RMA#R032847.					
SNIAS		ACCUMULATOR	LEAKING	10/04/2001	
AS350B		704A34240015	ROTSERVO	HEEA076630	
WILL NOT HOLD CHARGE. LEAKING.					
SNIAS		BRUSHES	ARCED	10/11/2001	
AS350B			STARTER GEN	HEEA076631	
BRUSHES ARCING WHEN STARTER IS TURNING. REPLACED WITH SERVICEABLE PART.					
SNIAS		STARFLEX	CRACKED	10/19/2001	317
AS350B		350A31191600	MAIN ROTOR	HEEA076927	
CRACKED SPHERICAL STOP CUT OUT AREA, LOWER AFT AS MARKED.					
SNIAS		LINER	WORN	10/31/2001	
AS350B	350A32050002	350A32501000	M/R BRAKE	HEEA077041	
WORN LINING.					
SNIAS		BALL	WORN	10/31/2001	
AS350B	350A33200406	350A33215001	TAIL ROTOR	HEEA077042	
WORN BALL. PENDING VENDOR RETURN FOR CREDIT.					
SNIAS		SERVO	LEAKING	10/31/2001	958
AS350B		SC5083	SERVOSYSTEM	HEEA077044	
LEAKING PAST SHAFT SEAL. PENDING VENDOR RETURN.					
SNIAS	TMECA	AEROSP	BEARING	10/15/2001	
AS350B	ARRIEL1B	350A35013004	62052RSIMT47C	BROKEN	10/15/2001
(CAN) DURING TAKEOFF/CLIMB OUT OF A WOODED AREA, THE PILOT GOT A HYDRAULIC LIGHT INDICATION. HE LATER REPORTED THAT THE AIRCRAFT HAD A COMPLETE HYDRAULIC FAILURE. THE CAUSE OF THE FAILURE WAS DUE TO A BEARING FAILURE IN THE HYDRAULIC DIVE PULLEY. THE CAGE OR THE BEARING HAD BROKEN APART CAUSING THE PULLEY ASSEMBLY TO SEIZE AND THE HYDRAULIC BELT TO BREAK. THE AIRCRAFT LANDED WITHOUT					
SNIAS	TMECA	IGNITER	WORN	10/19/2001	
AS350B	ARRIEL1B	9550168760		HEEA076801	
CONDUCTOR WORN. SENT TO TURBOMECA FOR CREDIT AGAINST REPLACEMENT PART PURCHASED.					
UNIVAR	FRNKLN	CRANKSHAFT	BROKEN	10/16/2001	378
1083	6A4165*		ENGINE	2001FA0000457	
CRANKSHAFT BROKEN IN FLIGHT, LANDED WITHOUT INCIDENT. CRANKSHAFT BROKEN ON THE FORWARD SIDE OF JOURNAL NR 1 CYLINDER.					
UNIVAR	CONT	ROD	BROKEN	08/29/2001	
415C	C75*		NLG STEERING	2001FA0000406	
STEERING ROD KNUCKLE BROKE AS AIRCRAFT WAS BEING REPOSITIONED AFTER LOG. THIS ROD HAS BROKEN NUMEROUS TIMES IN THE PAST, KNOW OF 3 RODS BREAKING IN THE PAST.					

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		OPER. Control No.		8. Comments (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)	DISTRICT OFFICE	OPERATOR DESIGNATOR
MALFUNCTION OR DEFECT REPORT		ATA Code				
		1. A/C Reg. No. N-				
Enter pertinent data	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER			
2. AIRCRAFT						
3. POWERPLANT						
4. PROPELLER						
5. SPECIFIC PART (of component) CAUSING TROUBLE						
Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.			
6. APPLIANCE/COMPONENT (Assembly that includes part)						
Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number			
Part TT	Part TSO	Part Condition	7. Date Sub.	Optional Information:		
				Check a box below, if this report is related to an aircraft		
				<input type="checkbox"/> Accident; Date _____ <input type="checkbox"/> Incident; Date _____		
				REP. STA.	OPER.	
				MECH.	AIR TAXI	
				MFG.	FAA	
				COMPUTER	OTHER	
				SUBMITTED BY: _____		
				TELEPHONE NUMBER: () _____		

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